

The Creativity of Text-to-Image Generation

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Abstract

Text-guided synthesis of images has made a giant leap towards becoming a mainstream phenomenon. With text-to-image generation systems, anybody can create digital images and artworks. This provokes the question of whether text-to-image generation is creative. This paper expounds on the nature of human creativity involved in text-to-image art (so-called "AI art") with a specific focus on the practice of prompt engineering. The paper argues that the current product-centered view of creativity falls short in the context of text-to-image generation. A case exemplifying this shortcoming is provided and the importance of online communities for the creative ecosystem of text-to-image art is highlighted. The paper provides a high-level summary of this online ecosystem drawing on Rhodes' conceptual four P model of creativity. Challenges for evaluating the creativity of text-to-image generation and opportunities for research on text-to-image generation in the field of Human-Computer Interaction (HCI) are discussed.